



MEMORANDUM

TO: The Pew Initiative On Food And Biotechnology

FROM: The Mellman Group, Inc. Public Opinion Strategies, Inc.

DATE: November 7, 2005

SUBJECT: Recent Findings

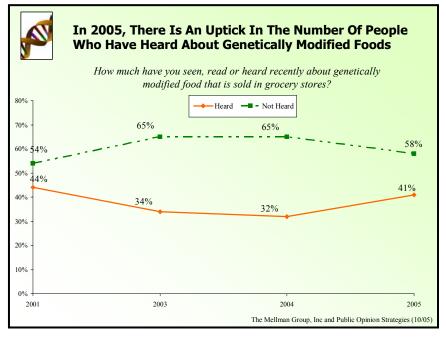
This memorandum represents our initial analysis of a survey of 1000 American consumers who were interviewed by telephone October 10-16, 2005. Tracking data come from surveys of the same size, also conducted for the Pew Initiative, conducted January 22-28, 2001, August 5-10, 2003, and September 22-26, 2004. The margin of error for the survey is +/- 3.1% at the 95% level of confidence. The margin of error is higher for subgroups.

KEY FINDINGS

- 1. Americans Continue To Know Relatively Little About Genetically Modified Foods And Biotechnology, Though Awareness Has Grown Over The Past Year
- 2. Awareness of Transgenic Animals Is Quite Low And People Are Opposed To Research Into Genetic Modification Of Animals
- 3. Consumers Most Strongly Support GM Uses That Are Designed To Protect Against Disease
- 4. Though Consumers Know Little About Potential Importation Of Foreign GM Products, They Favor American Regulation
- 5. Unlike Other Types Of Biotechnology, Americans Claim To Have Heard About Animal Cloning – And Are Uncomfortable With It
- 6. Consumers Strongly Believe That Ethical And Moral Considerations Should Be Part Of The Animal Cloning Regulatory Equation

Americans Continue To Know Relatively Little About Genetically Modified Foods And Biotechnology, Though Awareness Has Grown Over The Past Year

While nearly two thirds of Americans (61%) say they are generally familiar with science and technology, a majority (58%) remain unaware of genetically modified foods. with 41% saying they have heard about genetically modified food that is sold in grocery stores. The number of people who claim to have heard about genetically modified foods has increased slightly in 2005, though still shy of levels of awareness measured in 2001, in the



wake of the Star-Link corn controversy.

Men continue to be slightly more likely (43%) than women (39%) to have heard about genetically modified foods, but consumers across gender have become slightly more aware over the past year. As in previous years, awareness of genetically modified foods is strongest among the best educated, with half of college graduates (50%) aware of genetically modified foods, compared to 35% of those with high school or some college.

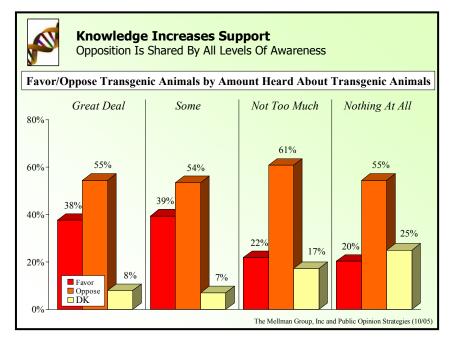
While knowledge of genetically modified foods has increased, fewer believe they have (25%) or are likely (40%) to eat genetically modified foods. Over half (57%) of those who have heard the most about genetically modified foods believe that they have eaten genetically modified foods, and 30% of those who have heard some believe the same. Just 15% of those who have heard "nothing at all" about genetically modified foods believe they have eaten them.

While opposition to introducing genetically modified foods to the food supply has declined since 2001, 50% oppose it, with a quarter of Americans (25%) favoring its introduction. Feelings are stronger among the opposition: 33% of Americans *strongly* oppose the introduction of these foods, compared to 8% who strongly favor it. Importantly, those who are most informed about genetically modified foods also oppose their introduction into the food supply, with 54% opposed among those who have heard "a great deal" about genetically modified foods, compared to 47% of those who have heard "some", and 51% of those who have heard "not much" or "nothing at all" about genetically modified foods.

Awareness of Transgenic Animals Is Quite Low, And People Are Opposed To Research Into The Genetic Modification of Animals

Just 34% of consumers have heard either "a great deal" or "some" about genetically modified animals, while 64% have not heard much about this technology.

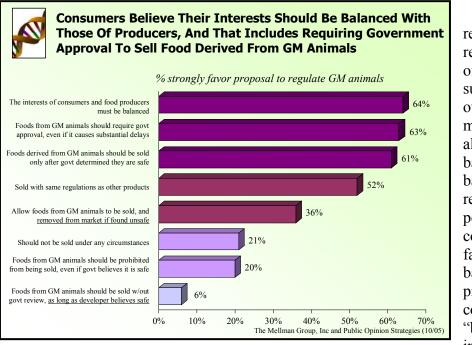
Opposition to research into genetic modification of animals is slightly higher (56%) than opposition to genetically modified food. However, increased knowledge of transgenic animals increases levels of support, with 38% of those who



have heard "a great deal" and 39% of those who have heard "some" about genetically modified animals favoring scientific research into genetically modified animals. While majorities of both sexes oppose genetic modification of animals, men are more likely (32%) than women (23%) to favor research. Importantly, majorities oppose this type of research across knowledge levels.

Consumers Most Strongly Support GM Uses That Are Designed To Protect Against Disease

Asked about various potential uses for genetic modification of animals, consumers were most strongly supportive of those which provide protection against disease. Perhaps a reflection on recent headlines about avian flu, developing heartier livestock is the most widely supported reasons to genetically modify animals, including to produce chickens resistant to avian flu (40% "very good reason") and to produce cattle resistant to mad cow disease (40% "very good reason"). At the other extreme, breeding novelty pets is considered a very good reason to genetically modify animals by only 4% of the public.



When it comes to regulating this type of research, consumers are of mixed mind: they support regulatory oversight of genetically modified animals, but also strongly oppose bans and want a balanced approach to regulation. Sixty-four percent (64%) of consumers strongly favor an approach that balances the interests of producers and consumers. That "balance" appears to include a regulatory role

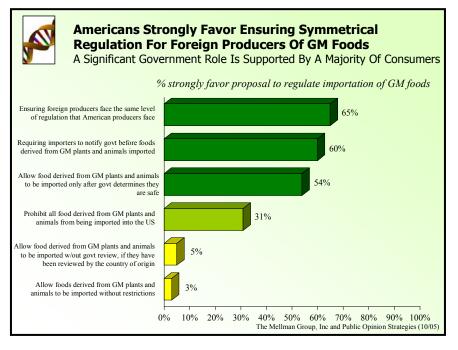
-61% strongly favor having the government determine foods are safe before they can be sold, and that support is strong even if such approval may cause substantial delays (63%). Only 6% of consumers believe foods from genetically modified animals should be sold without government review – even if the developer believes they are safe.

Consumers Know Little About Importation Of Foreign GM Products, And Tend To Oppose It

To date, all GM food products on the market have gone through the U.S. regulatory process. However, a number of other countries are beginning to develop their own GM food products, which could make their way into the U.S. market. To gauge their reactions to this possibility, consumers were asked a series of questions about GM imports. The potential for importation of genetically modified foods produced abroad is not on consumers' radar screen. Four in five Americans (80%) said they had heard "not too much" or "nothing at all" about the importation of genetically modified foods. With this low knowledge base, nearly two thirds (65%) oppose the importation of genetically modified foods, including a majority (52%) who

express strong opposition. Agricultural households are just slightly more supportive of importing genetically modified foods (26%) than non-agricultural households (20%), with both showing strong majorities opposing importation.

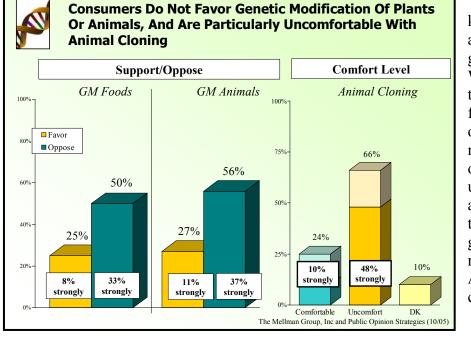
Given the large degree of skepticism surrounding the importation of genetically modified foods, it is not surprising that a majority of Americans support oversight over its distribution in the United States. A strong majority (60%) of consumers favor requiring importers to notify the government before GM plants or animals can be sold in the U.S. Additionally, 54% of Americans said that GM products should be imported only after U.S. regulators have determined they are safe.



Nearly two thirds (65%) of consumers strongly favor ensuring that foreign producers face the same level of regulation that American producers face. Awareness of the importation of modified foods does not change consumers' attitudes toward regulation of genetically modified foods, with 67% of those familiar with genetically modified imports favoring symmetrical regulations, compared to 64% of those unfamiliar with genetically modified imports. Support for uniform regulations for foreign producers is shared across gender and education. Additionally, very few strongly favor allowing GM importation without U.S. government review, even if foreign governments believe they are safe.

Unlike Other Types Of Biotechnology, Americans Claim To Have Heard About Animal Cloning – And Are Uncomfortable With It

The public claims to have a higher level of awareness of animal cloning than of other types of genetic modification: nearly two thirds (65%) of the public claims to have heard about animal cloning, compared to 41% of the public who have heard of genetically modified foods, 34% who are familiar with genetically modified animals, and less than one in five Americans (18%) who are familiar with potential imports of genetically modified foods.



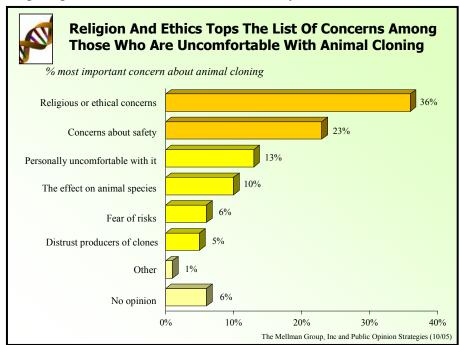
Consumers' knowledge of cloning appears to translate to greater opposition. While 50% are opposed to genetically modified foods and 56% are opposed to genetically modified animals, 66% of Americans are uncomfortable with animal cloning. Across these different types of genetic modifications, roughly one quarter of Americans offer consistent support.

Less than a

quarter (23%) of consumers believe food products from animal clones are safe, while 43% believe they are is unsafe; one third (34%) of consumers do not have an opinion on the safety of food products from animal clones. There is a distinct gender gap in attitudes towards animal cloning, with women expressing far more skepticism towards the technology. Nearly three quarters (72%) of women are uncomfortable with animal cloning and 50% believe it is unsafe, compared to 58% of men who are uncomfortable and 35% who believe it is unsafe.

Americans with strong religious attendance are also more likely to be uncomfortable with

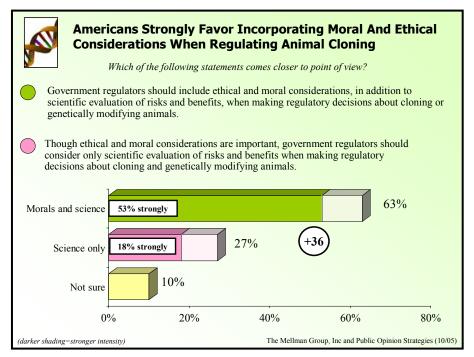
animal cloning. Among Americans who attend religious services once a week or more, 74% are uncomfortable with animal cloning. compared to 68% of those who attend 2-3 times per month, 63% of those who attend once a month, and 56% of those who attend a few times per year or less. Among those who are uncomfortable with animal cloning, "religion and ethical concerns" are the most



important reason for opposition for over one third (36%) of consumers, followed by concerns about safety (23%).

For consumers who are comfortable with animal cloning, supporting scientific advancement (28%) and lowering the price of food (21%) are two of the top reasons they support the technology. Women and consumers with high school educations are most interested in lowering the price of food, at 26% and 30%, respectively, while men and those with college degrees emphasize scientific advancement, at 30% and 38%.

Consumers Strongly Believe That Ethical And Moral Considerations Should Be Part Of The Animal Cloning Regulatory Equation



A strong majority (63%) of Americans believe governmental agencies should consider moral and ethical factors when making decisions about cloning and genetic modifications, with 53% feeling that way strongly.

Twenty-seven percent (27%) believe that such decisions should be based only on scientific evaluation of risks and benefits.

Support for incorporating moral and ethical standards into the equation is shared by both religious and non-religious Americans. While those who attend religious services regularly are more likely to favor standards that reflect moral and science considerations (70%), majorities of those who attend two or three times per month (60%), those who attend infrequently (63%), and those who attend a few times a month or less (56%) also favor incorporating those standards into these regulatory decisions.